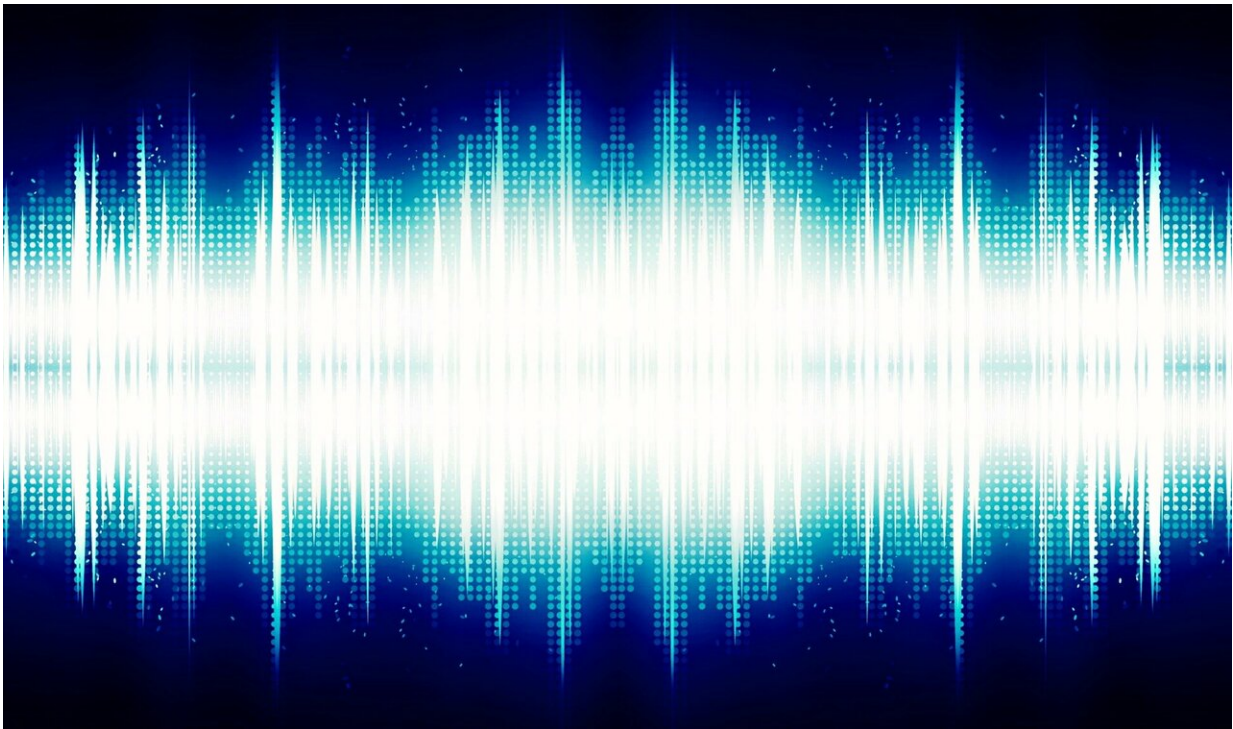


A practical guide for analyzing manipulated audio files

February 17 2023



Credit: CC0 Public Domain

The working group on Forensic Speech and Audio Analysis at the European Network of Forensic Science Institutes (ENFSI) has released a practical guide for forensic laboratories and forensic scientists involved in the analysis of manipulated audio files. Fraunhofer IDMT audio forensics expert Luca Cuccovillo was a member of the author team.

The number of manipulated [audio files](#) circulating on the Internet and on social media channels is increasing steadily. This can have far-reaching social, but also legal consequences. On the one hand, people can be deliberately misled or deceived by false or manipulated information. On the other hand, audio recordings are very often used as evidence in judicial cases. Undetected manipulations in [audio data](#) can have serious consequences in all these cases but are almost impossible to detect without the correct expertise and appropriate tools.

Which criteria and what kind of tools and frameworks should be used to examine audio material? The working group Forensic Speech and Audio Analysis at the European Network of Forensic Science Institutes (ENFSI) has released a practical guide for forensic laboratories and forensic scientists. This helpful guide describes technical procedures, necessary hardware and software, quality principles, and training recommendations, but also very practical approaches and methods for the forensic authenticity analysis of digital [audio recordings](#).

Luca Cuccovillo from the Fraunhofer Institute for Digital Media Technology IDMT in Ilmenau is one of the main authors of the best practice manual for digital audio authenticity analysis. Cuccovillo is a distinguished researcher in audio forensics, with specific expertise in the analysis of processing traces and in the detection of manipulated audio content. Since January 1, 2023, he supports the steering committee of the ENFSI Expert Working Group on Forensic Speech and Audio Analysis with his competencies.

ENFSI is a transnational association of forensic experts and institutions. The aim of the network is to establish an exchange of information across national borders and to participate in the latest developments of forensic science. In addition to the general work in the fields of quality and competence management, research and development as well as education and training, 17 different expert groups are working in different specific

forensic fields.

With the publication of its practical guide, the ENFSI Working Group on Forensic Speech and Audio Analysis has achieved an important goal. "With analysis methods, recommended tools, procedural guidelines, and training advice harmonized throughout Europe, manipulations can be tackled much more successfully," says forensics expert Luca Cuccovillo.

The guidelines in the best practice manual can be used beyond the authenticity analysis of audio evidence in court proceedings. The recommendations and advice collected within the manual are also suitable for the analysis of social media content and make an important contribution to target the fight against disinformation.

More information: The manual: [enfsi.eu/wp-content/uploads/20...
nticity-Analysis.pdf](https://enfsi.eu/wp-content/uploads/2023/02/ENFSI-Authenticity-Analysis.pdf)

Provided by Fraunhofer-Institut für Digitale Medientechnologie IDMT

Citation: A practical guide for analyzing manipulated audio files (2023, February 17) retrieved 6 May 2024 from <https://techxplore.com/news/2023-02-audio.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--